



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

[Handwritten signature]

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,768	08/06/2001	Edward G. Callway	00100.00.0820	9391

29153 7590 12/31/2007
ADVANCED MICRO DEVICES, INC.
C/O VEDDER PRICE KAUFMAN & KAMMHOLZ, P.C.
222 N.LASALLE STREET
CHICAGO, IL 60601

EXAMINER

VAN HANDEL, MICHAEL P

ART UNIT	PAPER NUMBER
----------	--------------

2623

MAIL DATE	DELIVERY MODE
-----------	---------------

12/31/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/923,768

Applicant(s)

CALLWAY ET AL.

Examiner

Michael Van Handel

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2007.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-20, 24-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-20, 24-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Miscellaneous

1. As noted by the applicant in the response received 10/15/2007, the Office Action mailed 6/15/2007 contained a typographical error. The applicant was correct in assuming that the Office Action was non-final. The examiner apologizes for any inconvenience.

Response to Amendment

1. This action is responsive to an Amendment filed 10/15/2007. Claims **15-20, 24-30** are pending. Claims **15, 24-29** are amended. Claims **1-14, 21-23** are canceled. The examiner hereby withdraws the rejections of claims **10-14, 29, and 30** under 35 USC 112, first paragraph, in light of the amendment.

Response to Arguments

1. Applicant's arguments regarding claims **10-19** and **24-30**, filed 10/15/2007, have been fully considered, but they are not persuasive.

Regarding claims **10-19** and **24-30**, the applicant argues that motion vectors and graphics drawing commands are not the same as noted in the cited Hannah reference and as well known in the art. The examiner respectfully disagrees. The applicant specifically argues that it is well known in the art that graphics drawing commands are used to create graphics objects by instructing graphics processing circuitry to draw a line, primitive, object or other graphic based on the drawing commands.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., that graphics drawing commands create graphics objects by instructing graphics processing circuitry to draw a line, primitive, object or other graphic based on the drawing commands) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

As noted in the Office Action mailed 6/15/2007, motion vectors stored in video encoding describe how a video receiver should render an image. Hannah illustrates this in the example of compressing a motorcyclist object 174c in a sequence of video frames. Since the motorcyclist image is likely to move to a different set of macroblocks in successive frames of the image, a macroblock 172 of a video frame 170 may be compared to macroblocks 172 in both previous frames and subsequent frames, looking for a matching image, such as the motorcyclist object 174c. Once found, a representation of the movement of the object, known as a motion vector, may be stored in lieu of a complete representation of the motorcyclist object 174c (col. 4, l. 44-52 & Fig. 2). Hannah further describes a situation, which includes graphics-only elements. Since graphics elements are usually created by means of high-level display lists of commands, the motion vector hints 108 may include data structures for handling movement of the graphics elements. For example, text, which is scrolled upwards is accompanied by a data structure of motion vector hints 109 containing an upward pointing vector field of the correct magnitude (col. 7, l. 40-48). Hannah also states that, for three-dimensional graphics, objects are supplemented with motion vectors projected onto the screen coordinate system (col. 7, l. 49-51). Hannah still

further discloses displaying MPEG-2 content and graphical elements on the remote display (col. 5, l. 54-57). The examiner notes that it is inherent that the video stream is decompressed and the graphics and video data combined in the decoding process for display on the remote display.

In response to the applicant's argument that graphics drawing commands are used to create graphics objects, the examiner notes that graphical drawing programs manipulate object-oriented graphics, such as lines, circles, blocks of text simply by selecting the object and moving it (see the definition of "drawing program" in the Microsoft Press Computer Dictionary, Third Edition). The examiner acknowledges the applicant's argument that motion vectors are used to compress already existing frames; however, the examiner notes that the motion vectors are used to create the frames at the receiving site. Motion estimation identifies objects in a video frame, which were also present in a prior video frame. The temporal redundancy is exploited by storing the relative position of an object in a video frame rather than the bitmap representation of the object itself (col. 4, l. 2-6 & Fig. 2). For example, a motorcyclist object 174c is compared to macroblocks 172 in previous and subsequent frames, looking for a matching image. Once found, a representation of the movement of the object is stored as a motion vector in lieu of a complete representation of the motorcyclist object (col. 4, l. 20-52). This motion vector allows the receiving site to create an image frame with the motorcyclist object having moved, without having to store the moved motorcyclist object. As such, the examiner interprets the motorcyclist object motion vector as commanding the receiving site on how to manipulate the motorcyclist object, so as to create a moved motorcyclist object. Similarly, video containing graphical elements is encoded with motion vectors for handling movement of the graphics elements (col. 7,

l. 40-48). As such, the examiner maintains that the motion vectors of Hannah are “graphics drawing commands,” as currently claimed.

Claim Objections

1. Claims **28, 29** are objected to because of the following informalities:

Referring to claim **28**, the examiner notes that the phrase “the wirelessly received graphics rendering commands” lacks antecedent basis. The examiner recommends that the phrase be changed to “the wirelessly received graphics drawing commands” and interprets the claim in the Office Action below as though the recommended changes have been made.

Referring to claim **29**, the examiner notes that the phrase “the graphics drawing commands” lacks antecedent basis. The examiner recommends that the phrase be changed to “graphics drawing commands” and interprets the claim in the Office Action below as though the recommended changes have been made.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims **15-19, 24-30** are rejected under 35 U.S.C. 102(e) as being anticipated by Hannah.

Referring to claims **15**, Hannah discloses a method for providing image data for a wireless display comprising:

- processing graphics drawing commands to produce rendered graphics image data and storing the rendered graphics image to a frame buffer (the examiner notes that a frame buffer is inherent to the enhancement block 104, since the enhancement block 104 derives motion vector hints and generates an enhanced image 114 based upon an enhancement made to an original image)(col. 2, l. 13-24, 50-67; col. 3, l. 1-67; col. 4, l. 1-67; col. 5, l. 1-67; col. 6, l. 58-64; col. 7, l. 29-48; & Figs. 4, 6);
- retrieving the rendered graphics image data from the frame buffer via a local bus and encoding the retrieved rendered graphics image data (col. 2, l. 66-67; col. 3, l. 1-2, 5-16; col. 7, l. 29-39) independent of a video stream to produce encoded graphics image data (the examiner notes that video frames may include graphics-only elements. The examiner interprets such frames as being encoded independent of a video stream)(col. 7, l. 40-48); and
- sending the encoded graphics image data to a short range wireless receiver using a short range wireless transmitter (the examiner notes that a short range wireless transmitter and a short range wireless receiver are inherent to re-broadcasting MPEG-2 transmissions to remote displays without the need for a cable connection)(col. 2, l. 28-32; col. 3, l. 1-2, 5-16; col. 5, l. 46-53; & col. 9, l. 30-36).

Referring to claim **16**, Hannah discloses the method of claim 15, comprising:

- decompressing a compressed video stream to produce a decompressed video stream (col. 2, l. 20-22, 38-48);
- recompressing the decompressed video stream to produce a recompressed video stream (col. 2, l. 30-34; col. 3, l. 1-2, 5-16); and wherein sending the encoded graphics image includes sending the recompressed video stream using the short range wireless transmitter (col. 2, l. 20-34, 66-67; col. 3, l. 1-2, 5-16; col. 4, l. 7-8; col. 5, l. 60-63; & col. 7, l. 29-63).

Referring to claim 17, Hannah discloses the method of claim 16, comprising:

- combining the rendered graphics image data with the decompressed video stream to produce frames of image data (col. 2, l. 13-67 & col. 3, l. 1-2, 5-16);
- storing the frames of image data in the frame buffer prior to recompressing (see examiner's note regarding the frame buffer in claim 10 above); and
- retrieving the frames of image data for recompression (col. 2, l. 66-67; col. 3, l. 1-2, 5-16; col. 7, l. 29-39).

Referring to claim 18, Hannah discloses the method of claim 15, comprising locally displaying the rendered graphics image data on a local display (col. 2, l. 35-48 & Fig. 1).

Referring to claim 19, Hannah discloses the method of claim 15, comprising:

- receiving, by the wireless display, a compressed video stream containing graphics and recompressed video (the examiner notes that this is inherent to Hannah, since it is required for reception of the transmitted graphics and video)(col. 2, l. 28-34; col. 3, l. 1-2, 5-16; & col. 5, l. 46-57);

- decompressing the received compressed video stream by the wireless display and producing decompressed image frames (the examiner notes that this is inherent to Hannah, since the received compressed video stream must be decompressed in order to view the content); and
- displaying the decompressed image frames on the wireless display (col. 5, l. 54-57).

Referring to claim 20, Hannah discloses the method of claim 15 comprising wirelessly sending drawing commands to a short range wireless receiver (the examiner notes that Hannah discloses sending motion vectors describing the color, dimension, and motion of objects in a video stream)(col. 3, l. 40-50; col. 4, l. 44-52; col. 7, l. 40-51; & Fig. 2).

Referring to claim 24, Hannah discloses a method for providing image data for a wireless monitor comprising:

- decompressing, by a first apparatus, a compressed video stream to produce a decompressed video stream (col. 2, l. 20-22, 38-48);
- recompressing the decompressed video stream to produce a recompressed video stream (col. 2, l. 30-34; col. 3, l. 1-2, 5-16);
- sending the recompressed video stream wirelessly and sending graphics drawing commands wirelessly to be processed remotely (the examiner notes that motion vectors are transmitted in the video stream and used in decoding and decompressing the video images. The examiner interprets these to be graphics drawing commands)(col. 2, l. 20-34, 66-67; col. 3, l. 1-2, 5-16, 36-40; col. 4, l. 7-8; col. 5, l. 60-63; & col. 7, l. 29-63).

Referring to claim 25, Hannah discloses the method of claim 24 comprising:

- processing, by a second apparatus, wirelessly received graphics drawing commands to produce rendered graphics data (the examiner notes that this is inherent to Hannah, since it is required for reception of the transmitted graphics and video)(col. 2, l. 28-34; col. 3, l. 1-2, 5-16; & col. 5, l. 46-57); and
- decompressing the recompressed video stream and combining the rendered graphics image data with the decompressed video stream to produce frames of image data (the examiner notes that this is inherent to Hannah, since the received compressed video stream must be decompressed in order to view the video and graphics content).

Referring to claims **26** and **27**, Hannah discloses a method/apparatus for processing graphics and video comprising:

- recompressing a received compressed video stream to produce a recompressed video stream (col. 2, l. 30-34; col. 3, l. 1-2, 5-16); and
- transmitting wirelessly said recompressed video stream with graphics drawing commands (the examiner notes that motion vectors are transmitted in the video stream and used in decoding and decompressing the video images. The examiner interprets these to be graphics drawing commands)(col. 2, l. 20-34, 66-67; col. 3, l. 1-2, 5-16, 36-40; col. 4, l. 7-8; col. 5, l. 60-63; & col. 7, l. 29-63).

Referring to claim **28**, Hannah discloses a method for providing image data for a wireless display comprising:

- receiving, via a short range wireless receiver, a recompressed video stream and graphics drawing commands (the examiner notes that this is inherent to Hannah, since

it is required for reception of the transmitted graphics and video without a cable connection)(col. 2, l. 28-34; col. 3, l. 1-2, 5-16; & col. 5, l. 46-57);

- decompressing the received recompressed video stream to produce decompressed image frames and processing the wirelessly received graphics rendering commands to produce rendered graphics image data (the examiner notes that this is inherent to Hannah, since the received compressed video stream must be decompressed and processed in order to view the video and graphics content); and
- displaying the decompressed image frames and graphics image data on a local display (col. 5, l. 54-57).

Referring to claim 29, Hannah discloses a wireless display system comprising:

- a first unit operative to:
 - o send graphics drawing commands to a short range wireless receiver using a short range wireless transmitter (the examiner notes that motion vectors are transmitted in the video stream and used in decoding and decompressing the video images. The examiner interprets these to be graphics drawing commands. The examiner further notes that a short range wireless transmitter and a short range wireless receiver are inherent to re-broadcasting MPEG-2 transmissions to remote displays without the need for a cable connection)(col. 2, l. 28-32; col. 3, l. 1-2, 5-16; col. 5, l. 46-53; & col. 9, l. 30-36); and
- a wireless display operative to:
 - o receive, via a short range wireless receiver, the recompressed video stream and graphics drawing commands (the examiner notes that this is inherent to

Hannah, since it is required for reception of the transmitted graphics and video without a cable connection)(col. 2, l. 28-34; col. 3, l. 1-2, 5-16; & col. 5, l. 46-57);

- decompress the received recompressed video stream to produce decompressed image frames and process the wirelessly received graphics rendering commands to produce rendered graphics image data (the examiner notes that this is inherent to Hannah, since the received compressed video stream must be decompressed and processed in order to view the video and graphics content); and
- display the decompressed image frames and graphics image data on a local display (col. 5, l. 54-57).

Referring to claim 30, Hannah discloses a method in a wireless display comprising:

- receiving, by the wireless display, encoded graphics image data that was encoded independent of a video stream (the examiner notes that video frames may include graphics-only elements. The examiner interprets such frames as being encoded independent of a video stream)(col. 7, l. 40-48), using a short range wireless receiver (the examiner notes that this is inherent to Hannah, since it is required for reception of the transmitted graphics and video without a cable connection)(col. 2, l. 28-34; col. 3, l. 1-2, 5-16; & col. 5, l. 46-57);
- decoding the received encoded graphics image data (the examiner notes that this is inherent to Hannah, since the received compressed video stream must be decompressed and processed in order to view the video and graphics content); and

- displaying image frames containing the decoded graphics image data (col. 5, l. 54-57).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Van Handel whose telephone number is 571-272-5968. The examiner can normally be reached on 8:00am-5:30pm Mon.-Fri..

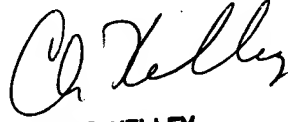
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
09/923,768
Art Unit: 2623

Page 13

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MVH


CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600